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Organic Farming: A Good Prospective For Sustainability

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Abstract:

Purpose: The high successes of growing organic farming in some countries are due to high awareness of the health problems caused by the consumption of contaminated food products. This paper is an attempt to ensure the constraints of farmers in organic farming in order to prompt the organic farming.

Design/methodology: The constructs of organic attitude and organic behaviour were measured using standardized scales with modification that represent variables of agriculture related to farmers.

Finding: Manure and bio fertilizer and other inputs must be made available through societies and other distribution centers at local level and should ensure the supply of quality inputs to farmers to enhance productivity level.

Originality: The study was an attempt to highlight the potential changes in the conventional agriculture to organic agriculture to achieving sustainability. It will enrich the literature related to organic farming.

Keywords: Environmental Degradation, food contamination, sustainability, Organic Farming.

Introduction

The method of crop and livestock production without the use of agrochemical, GMO's, antibiotics and growth hormones usually considered as organic farming. It is a holistic system designed to optimize the productivity and fitness of diverse communities within the agro-ecosystem, including soil organisms, plants, livestock and people (FAO 2002;Yussefi and Willer, 2003).

According to Bhattacharya (2011), sustainability and harmonious environment is the main goal of organic farming. In today's era there is an ample interest exhibited by marketing academics as well as practitioners with regard to the impact of marketing on promoting and maintaining ecological balance.

The non-renewable energy resources are depleting at a faster rate which are associated with the generation of non-bio-degradable pollutants that ultimately lead to an increase inhazardous condition of environment as well as health of the society. So we must rely on such a system which decrease the hazardous condition of environment and support the sustainable agricultural need of humans. For that matter various researchers have considered organic farming as a tool for enhancement of sustainability of environment and health of society with the promotion of green marketing (Mintuet al., 1993; Willer and Kilcher, 2011).

In Indian scenario, organic farming is an age-old practice and also known as "Javik Krishi". Haryana and Punjab being the major agricultural land of India support, the good demand of food in today's growing population condition (Kumar, 2010). In these two states Green marketing has rose

attention due to the environmental deterioration and it becomes a global problem (Kumar, 2010). So, this study was planned to critically analyze the problems of organic farming and its prospective in future to highlights it role in sustainability particularly in Punjab state of India.

Review of literature:

The World Health Organisation (WHO) described organic agriculture as a complete production management system which promotes agro ecosystem health and enhances biodiversity, biological cycles and soil productivity. By considering these facts the advanced communities emphasise on the management practices of organic farming and its implications on farmers and consumers as well.

Hansen, (2001) conducted research on Consumer Demand for Organic Foods–Domestic and Foreign Market Perspectives and found that as a credence good, information about an organic product is asymmetric. That is, consumers may not detect the presence or absence of organic characteristics even after purchase and use. Consumers may only know that the product is organic when they are informed. According to Hansen, the characteristics of organic foods that may enter the utility function of the consumer can be grouped into general and commodity-specific attributes. General attributes relate to food safety and human health, environmental effects, and farm animal welfare aspects, while commodity-specific attributes include variables such as visual appeal, nutritional value, taste, freshness, etc.

Yussefiet al., (2002) conducted research with the title "The World of OrganicAgriculture 2003-Statistics and Future Prospects" and argued that organic agriculture is not just a solution for rich countries, but can also be beneficial for poor countries, where it can contribute to purposeful and sustainable socio-economic and ecological development. Until now, however, Bangladeshi farmers have not been able to benefit from the growing global organic market, and they have even failed to create a good domestic market of organic foods. The shift from chemical to organic farming requires lot of efforts. First there is need to motivate farmers towards organic farming by guiding them the benefits of it.

Mervin and Velmurugan, (2013) conducted survey research on 750 respondents to identify Consumer's Attitude towards Organic Food Products. They have found that Organic marketing is a holistic marketing system. Organic food market is very challenging in food market. Consumers have raised great interest to healthy and quality food with high nutritional value, environmental concern and food safety. The research work also revealed that gender, monthly income, area of residence, family status, period of consumption, level of awareness on organic foods and state of health are associated with consumer positive attitude towards organic foods. The research result suggest that Government and social organizations have to take necessary steps in creating awareness in the midst of consumers on the merits of using organic foods and extend necessary assistance in cultivating high quantum of organic foods by the majority of the farmers.

Sharma and Kumari, (2013) revealed that occupation, educational qualification and place of living significantly affect the customer preference. It was found that there is significant difference between the awareness among the customers regarding the responsibility towards environment, while consuming goods and services belongs to rural and urban areas. From the ANOVA it was found that there is a significant difference between the customer's awareness toward the consumption of non-biodegradable

products and educational qualification on the basis of occupation such as business, agriculture, profession.

Ghosh et al.,(2014) investigated that among different organic manures, vermin compost resulted maximum plant growth (spread and height) with quality fruits in respect of total soluble solids and vitamin C content but treated plants produced fruits with maximum total sugar content. However, highest yield and maximum sizeable fruits were obtained when the plants were treated with neem cake in sweet orange. So the researcher focused on high productivity yields with the use of organic manure prepared by earthworm.

Gopinath et al., (2016) has discussed the significant increase in the area under certified organic farming. The research findings showed that many crops respond better to organic management particularly after an initial conversion period of 2-3 years. Organic farming can significantly contribute to improving the livelihoods of small holders as it generates higher incomes and involves less risk.

A number of studies conducted showed that soil quality improves under organic management under various conditions viz., physical, chemical, biological properties, availability of macro- and micronutrients, indicating an enhanced soil health and sustainability of crop production in organic farming systems (Sahaet al., 2008; Gopinath et al., 2011; Surekha et al., 2013; Dubey and Datt, 2014; Ghosh et al.,2014; Gopinath et al., 2016). According to recent trends consumers now a days paying attention to their food choices in light of sustainability and they are also ready to pay premium prices too (Canio and Martinelli, 2021).

An organic food is the last and compulsory option for the human being at any level of market because of increasing the health issues due to increasing the rate of growth in diseases and health degradation within the society. So, there is a need to introduce organic farming as a compulsory practice among the farmer in all over the world. So, that the agro products can only the better choice for the safeguard of the ecological balance or system.

Statement of Problem

The critical analysis of the literature related to organic farming and the problem of constraint faced by the farmers during farming. As per the review of literature maximum research work has mainly concentrated on the organic farming yields and its consumption and awareness. So, this study was planned to fill the gap identified in review of literature particularly on the problems faced by the farmers and highlights the lack of supports from the government during its implementation. The study focussed on the problem faced by the farmers during the organic farming and highlights absence of govt. Policies/support for organic farming.

Objectives:

To explore the problem faced by the farmers during the organic farming in Punjab.

Hypothesis:

H0: There is no significant problem faced by the farmers in Punjab.

Research design:

Material and methods:

For this study 170 farmers were selected from the Punjab across the district of Doaba, Malwa and Majha. The response obtained on five-point Likert scale and based on primary data (Likert, 1932). During the study period, 15 districts were selected randomly to measure the degree of attitude of the farmers towards organic farming practices; an attitude scale was constructed by following the method of Edwards (1969). All possible statements which discriminated the positive and negative attitudes of the farmers towards organic cultivation were collected and included in the scale. The attitude scale developed by Jaganathan, (2004) was adopted and modified according to the requirements of the study. Primary data were collected using a pre-tested questionnaire.

Sampling:

Sample of 170 male farmers was taken from the state of Punjab. Punjab is very proficient for agricultural practices, not only agriculture but the farmers are very adaptive towards modern agricultural practices. During the study period, 15 districts were selected and 170 farmers wereselected from the large population of districts viz.,Doaba, Malwa and Majha. It is pertinent to mention that only male farmers were selected as sample respondent on the basis of judgement of researchers those female farmers are few in numbers in agriculture in Punjab (Mitra et al., 2012).In this concern, initially some of the area's farmers were personally contacted and they were being told about the purpose of the study. They were requested to fill the questionnaire as sample respondents; and also suggest more farmers to become a part of the sample. Initially farmers are hesitating to share anything and denied to spend their time for filling up the questionnaire at the time of their work. Accordingly, it was thought out that if they would be given a sufficient time for filling the questionnaire at the timing of their work (separate from their working hours). Those who finally become ready for the same act as a beginner, and in this way a network was set up between the farmers for getting the data collected.

Results and discussion:

Organic farming is an outcome of different factors like economic growth of farmers and growth of awareness about the health and hygiene of local people with the good availability of organic products. Accordingly, a questionnaire was designed to measure organic farming yields and availability of modern equipments and bio fertilizers along with readily available customers for the consumption of organic products. Literature was the main base of selecting the variables affecting farmers for organic farming and problem faced by them. A five-point rating from '1= completely disagree" to "5 =completely agree" was utilized. Also, various demographic features were included such as education, income and subsidy.

All possible statements which discriminated the positive and negative attitudes of the farmers towards organic cultivation including their problems too were collected and included in the scale. The attitude scale developed by Jaganathan (2004) was adopted and modified according to the requirements of the study. Primary data were collected using a pre-tested questionnaire during the year 2011. Survey indicates that attitudes of farmer towards organic farming and adoption of new technologies for higher growth of the yields ultimately influence on subsequent behaviours and moreover, help the government to design new policies for enhancement of organic farming.

At the outset demographic profile of sample is depicted before the presentation of results of data analysis. Table 1 provides a snapshot of sample of farmers. All the farmers in sample are males; so, the

percentage of male is cent per cent. Accordingly, to age majority (N=142, %=83.52) of farmers young having less than 25 years age. In terms of education, percentage of educated (N=60, % =35.29) in the sample is high followed by educated people and those having only school education. Considering income, maximum works get a gross income of Rs. 100,000. Similarly, Kundu et al., (2011) revealed in his study that preference of organic farming is based on age factor and economic status of the farmer. However, during the present investigation main influence was found to be gender factor and educational status of the farmer.

It has been mentioned that a five-point measurement was obtained from the questionnaire. However, for a refined analysis five-point measurements was converted to three for obtaining the categories of satisfied- dissatisfied respondents. For the same, the respondents who checked the'completely agree' and agree response merge into on category of satisfied farmer. On the similar ground, those positioning on the responses of 'Disagree and completely disagree were termed as "dissatisfied farmer'. Respondents who mark the option viz., "Neither agree nor disagree' were termed as indifferent. It can be said that farmers satisfied or dissatisfied do not vary according to those particular parameters. However, if significant difference is noticed the reverse will be true. Further, it is to be mentioned that observed frequencies highlight how many farmers among the total farmers selected checked a particular category. On the other hand, expected count is arrived at on the basis of equal probability of farmers for choosing a particular response. As an instance, on a five-point measurement, for the total of 160 farmers, expected count with equal probability can be calculated as 160 divided by 5 which is equal to 32. Similarly, Subrahmanyeswari and Chander, (2008) have also revealed that the attitude of registered organic farmers towards organic livestock farming is affected by the availability of organic food and fodder for their livestock's.

Depicts that majority of farmers (N=130, %=76.47) are completely agree that they are satisfied with the earning from the agriculture while only marginal (N=20, %=11.76) farmers that are completely disagree. The chi square test statistics (X^2=37.999;p=.000) for these responses confirms that the observed frequencies on the basis of these responses, three category of farmers have been obtained, namely satisfied, indifferent and dissatisfied (as explained earlier). It is found that a substantial part of the sample falls under satisfied group of farmers (N=130, %=76.47) followed by dissatisfied group (N=20) whereas the group of indifferent farmers has a lowest share (N=10). Here, on the basis of chi square (X^2). Again, a satisfied difference is attained in observed and expected frequencies number of valid cases

Further Research Directions

During the survey it was found that most of the farmers prefer vermin compost for farming that was prepared from waste material like leaves, dung and kitchen waste etc. by the help of Earthworm. Some of the farmers were using natural decomposed cow dung as a fertilizer due to the non-availability of vermin compost throughout the year. It was observed that the government should supports and must provide financial incentives to the farmers for the growth in organic sector for superior and quality food, vegetables etc. through organic bio fertilizers and they must be readily availability to the farmers. If modern techniques along with production of good quality bio manure at farmer level could be financed by the government, then the organic agriculture will progress nationally and internationally. Moreover, government should subsidise the young farmers and focus on new policies towards the exploration of new biological species which have high potential to form bio- fertilizers.

Table 1

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37.666[a]	3	.000
Likelihood Ratio	38.571	3	.000
Linear-by-Linear Association	.475	1	.491
N of Valid Cases	167		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.32.

Table 2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.596[a]	4	.108
Likelihood Ratio	7.632	4	.106
Linear-by-Linear Association	4.690	1	.030
N of Valid Cases	167		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 1.13.

The study is based only on a regional sample; thus, the results cannot be enlarged to a fuller extent. The sample size may further studies to include more farmers probably from different states from all over India. The study works only at exploratory level; however, future researchers can go deeper into the factors motivating the farmers and the factors that could motivate for organic farming. Future researchers can also analyse geochemical, demographic, psychological, biological and socio-economic factors which can affect attitude of farming towards organic farming. Profiles of less satisfied, moderately satisfied and highly satisfied farmer may be obtained on the ground of segmentation analysis which may give more advanced and generalized results. Also, more recent techniques of data analysis may be applied. In thiscircumstance, probably there is again a need to increase the sample size from different states for reaching at appropriate decision.

Conclusion:

The present paper indicate the problems faced by the farmers who are adopting organic farming and the survey of their problem can be highlighted to government sectors or police maker to consider the constraints of organic farming so that farmer can easily opt for the organic farming with great ease and help in sustainability.

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